

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

EXPANSE NETWORKS, INC.

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PLAINTIFF,

§

vs.

C.A. NO. 02-CV-2857

CATALINA MARKETING CORP.,

§

DEFENDANT.

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DEFENDANT'S REPLY IN SUPPORT OF ITS
MOTION FOR SUMMARY JUDGMENT OF
INVALIDITY OF THE '129 AND '348 PATENTS

Dated: July 16, 2004

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I. INTRODUCTION

Expanse has failed to establish any genuine issues of material fact regarding the teachings of the prior art or prior public uses that would preclude summary judgment of invalidity under Expanse's claim construction.¹ As neither party submitted testimonial evidence regarding invalidity based on the '257 patent, the undisputed evidence of record is the '257 patent itself and the '129 and '348 patents-at-issue. These are written documents capable of interpretation by the Court. With the complete lack of any evidence submitted by Expanse to assert a fact issue as to the interpretation of the '257 patent, there cannot be any genuine issues of material fact regarding anticipation by the '257 patent. Similarly, other than the undisputed documents themselves, no evidence was submitted regarding anticipation by the '764 patent. As such, these issues are ripe for summary judgment.

There is also no genuine issue of material fact regarding the invalidity of the '129 and '348 patents based on prior public use. Catalina submitted declarations, including one from an independent expert in targeted marketing, supporting the prior public uses of the very methods that Expanse asserts infringe the '129 and '348 patents. These declarations were further supported by documentary evidence. Expanse has not submitted any contradictory evidence. In the absence of any disputed facts, these issues are also ripe for summary judgment.

¹ By focusing on whether the cited prior art (including Catalina's own prior public uses) invalidates the '129 and '348 patents under Catalina's claim construction, Expanse has substantially failed to respond to Catalina's Motion for Summary Judgment of Invalidity. *See* Expanse's Response on Non-infringement, p.1. Catalina's Motion plainly indicated that, although it disagrees with Expanse's construction, Catalina was relying on Expanse's construction for purposes of establishing invalidity. *See* Brief on Non-

II. INVALIDITY OF CLAIMS BASED ON THE '257 PATENT

Expanse reads the disclosure of the '257 patent too narrowly, improperly focusing on the preferred embodiment related to television viewing and disregarding both the inherent and explicit teachings related to consumer purchases. *See Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1320 (Fed. Cir. 2004) (“prior art reference may anticipate without disclosing a feature of the claimed invention if the characteristic is necessarily present, or inherent, in the single anticipating reference”); *In re Inland Steel Co.*, 265 F.3d 1354, 1361 (Fed. Cir. 2001) (improper to only consider prior art’s preferred embodiment, all disclosed embodiments must be evaluated for what they fairly teach). A review of its teachings, as a whole, demonstrates that each of the claim elements in the '129 and '348 patents are disclosed in the '257 patent.

A. CONSUMER PROFILE

Each of the claims at issue requires a consumer profile. Expanse incorrectly asserts that the '257 patent uses the term “profile” differently than the '129 and '348 patents. Expanse’s Response, p.8. Expanse is wrong. The '257 patent plainly discloses a “profile,” which is the exact term used in the claims of the '129 and '348 patents. Since Expanse did not act as its own lexicographer to provide a special definition of “profile,” and neither did the patentee of the '257 patent, the term in each of these patents has its ordinary meaning. Expanse has not pointed to any basis for distinguishing the ordinary meaning of the term “profile” in the claims at issue from that of the same term in the prior art.

infringement Motion, pp.1, 4.

Expanse further incorrectly argues that the '257 patent "defines" the term "profile" as "preferred characteristics" of video programs. Expanse's Response, p.9. The passages of the '257 patent cited by Expanse not only demonstrate that no explicit definition of "profile" (contrary to its ordinary meaning) was provided in the '257 patent, but also plainly demonstrates that Expanse is improperly focusing only on the preferred embodiment of the '257 patent. *See In re Inland Steel*, 265 F.3d at 1361. In addition to the embodiment for profiles based on viewing habits, the '257 patent also discloses consumer profiles based on actual purchases made by the consumer. Gorman Exhibit 2, col.47, ln.66-col.48, ln.4. As such, Expanse cannot argue that the '257 patent customer profile is not the same kind of "profile" claimed in the '129 and '348 patents.

Despite its assertion that the patents use the term differently, the remainder of Expanse's argument actually addresses how the profiles are created and used, as opposed to the meaning of the term "profile." Expanse's Response, pp.8-10. These issues really relate to other claim terms, such as generating, discussed in detail below; however, Catalina will address in this section the arguments contained in Expanse's Response under the corresponding heading "consumer profile."

Disregarding the passages of the '257 patent cited by Catalina, Expanse asserts that "[n]owhere in the '257 patent does it teach a method of inferring demographic data based on purchase behavior." Expanse's Response, p.10. The customer profile in the '257 patent plainly may include demographic information, such as age, gender, race, residence zip code, and other sociodemographic data, that may be inferred from viewing habits or "records of customer purchases." Gorman Exhibit 2, col.48, lns.5-16; col.48,

lns.5-22. This is the same kind of profile including demographic characteristics claimed in the '129 and '348 patents.

Expanse then asserts that the “clustering” technique of the '257 patent is somehow not the same as inferring demographic data based on purchase behavior claimed in the '129 and '348 patents. Expanse's Response, pp.9-10. The clustering technique of the '257 patent is used to update profiles of one customer based on similarities between that customer and another customer because it is inferred that if customers have one thing in common then they are likely to have other things in common. *See* Gorman Exhibit 2, col.34, lns.24-25; col.34, lns.58-59. Therefore, because customer A has a profile (under Expanse's construction) of having children and has purchased diapers it can be inferred that customer B also has children when customer B buys diapers. This type of clustering is exactly the kind of inferring demographics and other characteristics claimed in the '129 and '348 patents. Indeed, this exact technique is disclosed in the '348 patent: “Purchase records are transmitted to the consumer profiling system which updates the consumer profiles based on product characterizations which include demographic profiles of the typical purchaser of that product as well as the product brand and size.” Gorman Exhibit 6, Abstract (emphasis added).

Furthermore, profiling by clustering is only one technique described in the '257 patent. Gorman Exhibit 2, col.37, lns.49-67. The '257 patent also discloses inferring program preferences based on an individual customer's viewing habits, without necessarily employing the clustering technique. Gorman Exhibit 2, col.14, lns.4-7;

col.37, lns.64-67. Therefore, creating a profile by inferring demographic data based on purchases is inherently disclosed in the '257 patent.

B. ADVERTISEMENT PROFILE

Each of the claims of the '129 patent at issue also require an advertisement profile for each of a plurality of advertisements. Once again focusing too narrowly on the preferred embodiment, Expanse claims that the '257 patent "clearly equates 'content profiles' with 'program characteristic lists,' not advertising profile information." Expanse's Response, p. 10. However, the '257 patent broadly discloses that the "present invention relates to a customer profile system in which characteristics of a data source are quantified in some objective manner and stored as content profiles..." *See* Gorman Exhibit 2, col.9, lns.30-33. Products available for purchase, or products that would be advertised, are within the scope of "data source" in the '257 patent. Gorman Exhibit 2, col.9, lns.23-25 ("the system described herein may also be used for selecting receipt of desired data services and shop at home services, and for selecting from available music and multimedia offerings"); col.50, ln.66-col.51, ln.7 (The method "may be generalized for use in other types of data retrieval systems besides video and music. For example, the techniques of the invention may be used for the optimum selection of any chunks of information such as stock market data, print information (e.g., for personalized newspapers), or multimedia information which can be downloaded over networks such as the Internet."). Expanse fails to demonstrate how these content profiles, which include a wide range of topics including characteristics related to "life experiences and emotions" and "scientific, socio-political, cultural, imagination evoking, or psychological content,"

are not the same as an advertisement profile in the '129 patent. *See* Gorman Exhibit 2, col.11, lns.52-58. This failure is particularly poignant considering the '257 patent explicitly discloses that "products available for purchase can be characterized using different attributes." *See* Gorman Exhibit 2, col.47, lns.60-63. If characterizing products available for purchase with different attributes is not an advertisement profile within the scope of Expanse's claim construction, it is difficult, if not impossible, to image what would qualify as an advertisement profile.

Expanse admits that the information disclosed in the '257 patent as part of the content profile is "more akin to a target market than it is to an ad profile." Expanse's Response, p.10. This argument actually supports Catalina's position that the content profile of the '257 patent is the same as the advertisement profile of the '129 patent. The plain language of claim 17 of the '129 patent requires that the "advertisement profile identifies discretionary characteristics of an intended target market." Gorman Exhibit 5, claim 17 (emphasis added). This claim language is overlooked by Expanse altogether on this issue.

C. RECEIVING

The asserted claims of the '129 patent require the step of receiving the advertisement profile, which is described as a "content profile" in the '257 patent. Expanse asserts that the '257 patent does not disclose receiving a content profile. Expanse's Response, p.17. The '257 patent states:

In a preferred embodiment, the customer profiles for each household are stored in the set top multimedia terminal for that customer's household.

The content profiles received with the electronic program guide data are preferably stored at the set top multimedia terminal and compared by the set top multimedia terminal to the customer profiles for each customer.

Gorman Exhibit 2, col.25, lns.13-19. This passage describes the set-top multimedia terminal as the programmed computer in the '129 patent. The terminal receives program guide data indicating what programs are scheduled for what channels at particular times. Along with the program guide, the terminal receives the content profile transmitted from content provider. This means that for programs listed in the guide, the terminal receives a program profile that identifies characteristics of a target audience for that program. The terminal then compares the program profile to consumer profile to determine which programs match the consumer's profile. This is exactly the process, and the type of "receiving," claimed in the '129 patent.

Relying on the above quoted passage, Expanse argues:

That passage is referring to very specific data from the electronic program guide, *which may become a part of the program profile. The program-related information is not equivalent to advertising profiles and advertising profiles are not explicitly mentioned.* The '257 patent clearly equates "content profiles" with "program characteristic lists", not advertising profile information.

Expanse's Response, p.17 (citations omitted, underlining in original, italicized emphasis added). This argument once again demonstrates that Expanse improperly focuses on the preferred video programming embodiment when other types of data or content, including advertisements and infomercials, are plainly disclosed. Gorman Exhibit 2, col.47, lns.63-66 ("The agreement matrix can also be used to select infomercials or other advertisements that the customer is most likely to watch and to respond to by making purchases."). The law does not require exact identity between the words used in the '257

patent and the claim language at issue.² *See Toro*, 355 F.3d at 1320 (invalidation may be by inherent disclosure); *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1479 (Fed. Cir. 1986) (*ipsissimis verbis* not required for invalidity). The mere fact that the '257 patent does not refer to an “advertisement profile” does not mean that such a profile is not taught. One of ordinary skill in the art would understand that the “content profile” according to the '257 patent includes an “advertisement profile.”

D. GENERATED FROM PURCHASES/TRANSACTIONS

1. The '257 Patent Does Teach Generation of an Initial Profile from Viewing Habits or Actual Purchases

Each of the claims at issue requires the consumer profile to be generated from purchase or transaction records for the consumer. Because the profile is generated from information regarding purchases made, it must include information other than mere deterministic data (data reported directly by the consumer). *See* Expanse's Response, p.27.

Expanse asserts that the claims are not invalid because the '257 patent only teaches generation of initial customer profiles based on deterministic data (i.e. data directly reported by the consumer) or deterministic clustering techniques.³ Expanse's Response, pp.11-12. This is an incorrect reading of the '257 patent. Although use of deterministic data (including deterministic data used to identify clusters) is taught in the

² Although exact identity of words is not required, the fact that the '257 patent explicitly recites that the content profile is “received” further emphasizes that this element is disclosed.

³ Clustering techniques in the '257 patent are used to profile customers with similarities by inferring that is customers A and B have one thing in common they are also likely to have other things in common. Gorman Exhibit 2, col.34, ln.24-65. Clusters may be formed based on the programs different customers actually watch (i.e. for creating an initial probabilistic profile). Gorman Exhibit 2, col.34, lns.31-32.

'257 patent, that is only one of the embodiments disclosed. Gorman Exhibit 2, col.4, lns.40-46; col.5, lns.43-48. Empirical determination based on viewing habits and other possible methods for generating the initial customer profile in the '257 patent are described as follows:

In accordance with the invention, there are several ways to develop the initial customer and content profiles for such characteristics. For example, the initial customer profile may be assigned on the basis of the customer's zip code or other characteristic demographic information. In other words, the profile may be set to a profile typical of the customer's zip code area or to a typical profile determined by interviews or empirically by monitoring what customers watch. Similarly, each customer may be assigned a generic customer profile which is personalized over time through the profile adjustment techniques to be described below. Alternatively, a customer may be asked to name several of his or her favorite movies and television shows so that an initial customer profile may be determined by combining or averaging the content profiles of the selected movies and television shows. In addition, each customer may complete a ballot for each viewing mood. This latter approach builds upon the technique described by Hashimoto in U.S. Pat. Nos. 4,745,549 and 5,075,771 and will be described in some detail here.

Gorman Exhibit 2, col.11, ln.59-col.12, ln.10 (emphasis added). This passage even appears under the heading "Creating Initial Customer and Content Profiles." Gorman Exhibit 2, col.11, ln.30. By referring to "creating" and "ways to develop" the initial customer profile "empirically" based on actual programs watched by the customer, the '257 patent describes generating a consumer profile like that claimed in the '129 and '348 patents.

The '257 patent also describes creating an initial customer profile based on programs watched in the following passage:

Alternatively, clusters may be formed from reported data, such as zip code or other census data (i.e. for creating an initial deterministic profile). Gorman Exhibit 2, col.48, lns.9-10.

As noted in Section II.B. above, there are several methods for determining initial customer and content profiles. For example, initial customer profiles may be established by having the customer select a few of his or her favorite movies or television shows and then using the content profiles of those movies or shows to construct a customer profile. In addition, the initial customer profile may be based on replies to questions asked of the customer, or conversely, the customer may be assigned a customer profile typical of people in his or her demographic group. Similarly, initial content profiles may be established by using ratings by experts or test groups indicating the degree of presence of different characteristics or by using the relative frequencies of words in movie reviews or closed captioned listings and the like. However, it is often useful to use data indicating which programs each viewer has watched in order to determine the initial profiles for either new customers or new programming.

Gorman Exhibit 2, col.37, lns.50-67 (emphasis added).⁴ This passage confirms that deterministic data and deterministic clustering techniques are not the only means of generating an initial customer profile in the '257 patent, contrary to Expanse's assertion otherwise.

Finally, the '257 patent also broadly discloses general use of statistical methods, as distinguished from deterministic clustering or deterministic methods, for creating an initial customer profile:

The weighting of the characteristics in the customer and content profiles somewhat depends on how the profiles were determined initially. For example, the weighting of the customer profiles may be obtained directly from a questionnaire by asking the customer to appropriately scale (from 1-10) his or her preference for each characteristic [deterministic method]. On the other hand, if the customer profile is assigned based on demographics, zip code, and the like, the average weights for other customers with the same demographics, zip code, and the like may be used

⁴ This passage is listed under the heading "D. Creating Initial Profiles from Clusters." However, the description is a recap of the prior description for creating initial customer profiles for individual customers without clustering. The actual discussion of clustering begins in the third paragraph under this heading, "[b]y using clustering techniques, one can also determine an initial customer profile..." Gorman Exhibit 2, col.38, lns.18-19 (emphasis added).

[deterministic clustering method]. When more statistical techniques are used for creating the initial customer and content profiles [probabilistic profiling], the weights may be determined mathematically as, for example, the reciprocal of the standard deviation of the characteristics. Of course, other weighting techniques may also be used.

Gorman Exhibit 2, col.13, lns.40-54 (emphasis added). It is clear that the '257 patent teaches methods of initially determining the customer profile, other than just the deterministic and deterministic clustering methods asserted by Expanse. Moreover, one of ordinary skill in the art would clearly understand that the teaching in the '257 patent regarding monitoring programs watched would equally apply to monitoring purchases made, particularly since the '257 patent specifically describes using purchase records for profiling. Gorman Exhibit 2, col.47, ln.66-col.48, ln.4.

2. Updated is the Same as Generated

Although nothing in Expanse's construction, or the claim language, limits the claimed generation of a consumer profile to an initial profile (as opposed to a later updated profile), Expanse now argues that "generated" requires the profile to be the initial profile.⁵ Expanse admits that the '257 patent teaches "updating" customer profiles,

⁵ Interestingly, Expanse takes another inconsistent position with respect claim construction in its argument. Expanse asserts that "[i]ndependent claim 17 of the '129 patent discloses a method 'wherein the multiple transactions used to generate the consumer profile include purchases of the consumer from multiple points-of-sale.'" Expanse's Response, p.11. However, this clause actually appears in the preamble to claim 17, which according to Expanse's Markman argument is rarely of any significance to claim construction. Expanse's Markman Response, p.8. Although Catalina believes the lengthy, detailed preamble of the '129 patent's claim 17 is relevant to construing that claim because it actually adds limitations, under Expanse's argument, the actual elements of the claims do not include a generating step. The claim elements only require the consumer profile be retrieved, which the parties have stipulated means to locate in computer storage. Gorman Exhibit 9. Obviously, a previously stored profile that is retrieved does not have to be the initial profile. Therefore, Expanse's argument regarding a distinction between updated and generated is at least irrelevant to the invalidity of the '129 patent.

but argues that “updating” is not the same as “generating.”⁶ Expanse’s Response, p.12. This is purely semantic game-playing. The '257 patent teaches updating an initial customer profile by further monitoring the customer’s viewing or purchase habits. Gorman Exhibit 2, col.14, lns.4-7; col.47, ln.66-col.48, ln.4. Obviously, when a profile is updated, a new profile is created or generated. The '257 patent even refers to the updated profile as a “new” profile that is “created.” Gorman Exhibit 2, col.32, lns.35-36. Therefore, every time a profile in the '257 patent is updated, a new profile is generated within the scope of the '129 and '348 patents’ claims.

In fact, the '129 and '348 patents both describe and claim this same type of updating. Examples of this updating are as follows:

- “A consumer profiling system is presented in which consumer profiles are formed and updated based on their purchases. The consumer profiles contain both demographic data and product preferences. Purchase records are transmitted to the consumer profiling system which updates the consumer profiles based on product characterizations which include demographic profiles of the typical purchaser of that product as well as the product brand and size.” Gorman Exhibit 6, Abstract (emphasis added).
- “The present invention can be realized as a data processing system or computer program which processes consumer purchase records and updates their demographic and product preference profiles based on the use of product characterization information.” Gorman Exhibit 6, col.3, lns.18-22 (emphasis added).

See also, Gorman Exhibit 6, col.33-36; col.13, lns.12-22.

⁶ This construction presents an interesting conundrum for Expanse from an infringement standpoint. If “generated” is limited to the initial profile, then anytime a customer ID is identified a subsequent time by a matrix run by Catalina (under Expanse’s claim construction), that identification would not be an initial “profile” (again, under Expanse’s construction). Therefore, the only possible infringing activity under Expanse’s construction of the asserted claims would relate to the first time, and only the first time, a particular customer ID is identified in response to a matrix.

The '348 patent also claims this updating process by using the same claim term "generating" to refer to "generating" a second profile based on a second set of detailed purchase records (i.e. records regarding purchases since the initial profile was created). Gorman Exhibit 6, claim 4. This second profile is an "updated" profile, representing a more current profile of the customer, that is "generated" according to the '348 patent. The '348 patent also claims creation of a third, updated profile that is a mathematical calculation averaging the initial profile and the second profile. Gorman Exhibit 6, claim 4. In calculating an updated profile, the '348 patent arrives at a new result by creating a new, third profile.⁷ It is evident from the '348 patent and the '257 patent that updating and generating are the same.

E. MULTIPLE TRANSACTIONS/PURCHASES, MULTIPLE POINTS OF SALE/LOCATIONS, DETAILED RECORDS, AND INVENTORY

Claim 17 of the '348 patent requires that the consumer profile be generated from multiple transactions occurring at multiple locations. Similarly, claim 17 (and dependent claims 19 and 20) of the '129 patent requires that the consumer profile be generated from multiple transactions including multiple purchases occurring at multiple points of sale. Claims 19 and 20 of the '129 patent and claims 1 (and its dependent claim 8) and 17 of the '348 patent further require the consumer profile be generated based on the detailed records from those multiple transactions/purchases.

⁷ The parties have stipulated that "calculating" means to perform a mathematical operation. Logically, a mathematical operation creates, or generates, a result. Therefore, by calculating a third, updated profile in claim 4 of the '348 patent, the third profile is generated.

1. Multiple Transactions/Purchases and Multiple Points of Sale/Locations

Expanse argues that the '257 patent does not teach multiple transactions/purchases and multiple points of sale/multiple locations as required by the '129 and '348 patents. Expanse's Response, pp.13-14, 28. Expanse further admits that "transaction" is the same as a purchase. Expanse's Response, p.28. Expanse's arguments that the '257 patent does not disclose these features with respect to the '129 and '348 patents is incorrect. First, Expanse asserts that the "'257 does contemplate using purchase data to update a profile, but that data is obtained by the viewer shopping at home using infomercials, not from multiple points of sale as is required by the asserted claims of the '129 patent.'" Expanse's Response, p.13, *citing* the '257 patent at col.47, lns.59-60 (emphasis added). Technically shopping from home using infomercials (plural) is a form of making multiple purchases at multiple points of sale. The '257 patent contemplates the viewer making multiple purchases from multiple infomercials, which logically involves multiple sellers located at more than one location – the very definition of multiple points of sale asserted by Expanse.⁸ Gorman Exhibit 1.

Even if shopping at home using infomercials is not the same as multiple transactions and multiple points of sale, this is only one example in the '257 patent. Gorman Exhibit 2, col.47, lns.59-60 ("For example, when shopping at home using infomercials...") (emphasis added). Expanse clearly ignores other references using actual products purchased, aside from infomercials, to create customer profiles:

⁸ The '257 patent also contemplates viewing at multiple locations, including hotels, so "shopping at home" does not necessarily mean that purchases are made by a customer in a single location. Gorman

If purchase information is available, the customer profiles can be updated using the same algorithm described above with respect to video programs, but now the updating is based on what the customer actually purchased as well as what infomercials he or she watched.

Gorman Exhibit 2, col.47, ln.66-col.48, ln.4 (emphasis added). Here the customer profile is generated by updating the prior profile based on records (plural) of actual purchases, and may also be updated based on infomercials.

The initial customer profile would then be modified as that customer's viewing habits are established. As noted above, such modifications may be accomplished using psychographic data, customer preference profiles input directly by the customer, past movie selections, rave reviews, passive feedback based on actual television viewing by that customer, records of customer purchases, and the like.

Gorman Exhibit 2, col.48, lns.15-22 (emphasis added). Here the customer profile is generated by modifying a previous profile based on records of purchases (plural). These passages explicitly disclose multiple transactions by reference to plural records and purchases. One of ordinary skill in the art would also understand these disclosures to inherently teach multiple points of sale, because multiple purchases are frequently made at multiple locations.

Expanse then argues that there is no basis in the '257 patent for combining purchases from multiple locations, such as video, music, and/or bookstores, to create a customer profile. Expanse's Response, p.13. Expanse asserts that the '257 patent only teaches that the method may be used at different locations, but not that profiles are created from multiple locations. *Id.* at pp.13-14. However, the very passage cited by both Catalina and Expanse demonstrates that the '257 patent teaches combining the

Exhibit 2, col.49, lns.23-30.

profiling technique across numerous applications, including matching profiles across such applications:

Although the technique of the invention may be applied to match customer profiles for such disparate uses as computerized text retrieval, music and music video selection, home shopping selections, infomercials, and the like, in the presently preferred embodiment, the method of the invention is used for scheduling customer access to video programs and other broadcast data. In accordance with the preferred method, objective customer preference profiles are obtained and compared with content profiles of the available video programming.

Gorman Exhibit 2, col.2, lns.34-40 (emphasis added); Expanse's Response, p.14.

Moreover, the '257 patent teaches linking the customer profile to a particular customer ID number, just like in the '129 and '348 patents,⁹ so that the profile may be updated through such disparate uses.

This may be accomplished even in hotels and the like by providing individuals with personalized ID cards which store their profiles and card readers at the set top multimedia terminals which read in the customer's profiles from the ID cards for local recreation of the customer's agreement matrix. If desired, the updated customer profiles may be stored back to the ID card at the end of the customer's television viewing.

Gorman Exhibit 2, col.49, lns.23-30 (emphasis added). One of ordinary skill in the art would understand this as teaching that profiles may be updated based on the customer's viewing and purchasing activities at different locations.

The '257 patent further discloses use of customer IDs to create a profile based on purchases at different video, music, or book stores (or kiosks):

The methods of the invention also may be implemented in a kiosk or personal computer as illustrated in FIG. 11 for use in a video, music

⁹ The parties have stipulated that the term "consumer" in the '129 and '348 patents means "an individual or multiple individuals linked to a specific identifier such as a loyalty card number, or credit card number." Gorman Exhibit 11.

and/or book store to help customers decide which videos to rent or music and books to buy. The kiosk or personal computer would be similar in structure to the kiosk disclosed in U.S. Pat. No. 5,237,157 to Kaplan and would include a microprocessor 1102. However, a kiosk or personal computer implemented in accordance with the invention also accepts identity information from the customers either via keyboard 1104 or by electronic reading of a membership card by an electronic card reader (not shown) and retrieves customer profiles for that customer from memory 1106 for use in forming an agreement matrix as described above. Those skilled in the art will appreciate that, unlike the broadcast embodiment above, it is necessary in the kiosk embodiment to match the customer profiles to individuals by name or user ID rather than time slot. Such values are provided via keyboard 1104 or an electronic card reader so that the customer profiles for that customer may be retrieved.

Recommendations are then selected by microprocessor 1102 using the same algorithm described above for the selection of "virtual" channels. Movies which were recently rented by the customer could be determined by checking that customer's rental records and optionally be removed from the list presented to the customer. Customer profiles also would be updated based on the movies selected using the algorithm and optionally could be altered to include a rating of the movie provided by the customer when he or she returns the video.

Gorman Exhibit 2, col.49, lns.31-51 (emphasis added). One of ordinary skill in the art would understand this as teaching the use of a customer ID to associate a profile with a particular customer based on that customer's purchases at different stores, such as the bookstore or movie rental store. Creating a new, updated profile based on such purchases is plainly disclosed. Based on at least these passages, Expanse's assertion that the '257 patent does not teach creating customer profiles based on multiple transactions and multiple locations is unfounded.

Finally, in an apparent lapse of memory regarding its own statements just three pages earlier, Expanse argues that the '257 patent teaches updating a profile based on "the consumer's viewing choices," but does not teach "updating demographic information in a consumer's profile based on purchases." Expanse's Response, p.14 (emphasis added).

However, Expanse acknowledged on page 11 of its Response that the "257 patent discloses using purchases to 'update' the profile." Expanse's Response, p.11 (emphasis added). The correct reading of the '257 patent is the latter – it plainly discloses creating profiles based on purchases.

2. Detailed Records, Inventory

Claims 19 and 20 of the '129 patent and claims 1 (and its dependent claim 8) and 17 of the '348 patent require detailed records for the transactions/purchases be used to generate the consumer profile. Expanse directly argues, albeit incorrectly, that the '257 patent does not teach "transaction records" as claimed in claim 19 (and consequently claim 20) of the '129 patent and in the claims of the '348 patent. Although Expanse has a section of its Response titled "The '257 Patent Does Not Teach the Step of 'Generating the Consumer Profile Based On The Detailed Transaction Record and the Set of Heuristic Rules,'" for claim 1 (and dependent claim 8) of the '348 patent, it does not actually address the terms "detailed purchase records" in those claims. Expanse's Response, pp.21-23. That section of Expanse's Response only addresses generating a consumer profile from heuristic rules, which is discussed below.

With respect to the substance of Expanse's remaining arguments regarding "detailed transaction records," it incorrectly relies on Catalina's construction of these terms when Catalina's Motion was plainly based on Expanse's construction. Expanse's Response, p.20. In any event, Expanse clearly misunderstands the teaching of the '257 patent. Expanse has construed "detailed transaction records" to mean "records containing

information regarding the specific purchases (i.e. may include product UPC code, as well as information about quantity, where and/or when purchased)." *See* Gorman Exhibit 1.

As discussed above, the '257 patent collects and stores information regarding programs actually watched by the customer and uses that information to update the customer profiles. This information may include a customer ID (col.26, lns.37), a record of the day and time a program is watched (col.45, lns.27-30), a record of each program actually watched and the program's content (i.e. program genre, directors, actors, etc.) (col.6, lns.50-63; col.10, lns.7-8; and col.11, lns.45-52), and records of movie rentals (col.49, lns.54-58). Each of these examples was cited in Catalina's Opening Brief, yet Expanse only attempted to contradict the last example regarding movie rentals. Expanse selected this particular example because it was the only one that "appears to actually be a purchase." Expanse's Response, p.20. This is a further example of Expanse's misunderstanding of patent law. The anticipating disclosure in the '257 patent need not be explicit, rather an inherent disclosure is sufficient. *See Toro*, 355 F.3d at 1320. The '257 patent plainly discloses multiple examples related to the preferred embodiment of video programming, none of which are disputed by Expanse as being something other than detailed transaction records, and also plainly discloses application of the preferred techniques to other forms of data, including targeted advertising based on actual purchases made by a consumer. *See* Gorman Exhibit 2, col.4, lns.34-38; col. 47, ln.53-col.48, n.22. Therefore, the collection and storage of information regarding programming is equally applicable to purchases.

Moreover, the movie rental example in the '257 patent provided by Catalina is mischaracterized by Expanse. Expanse claims that the '257 patent simply suggests one embodiment:

Movies which were recently rented by the customer could be determined by checking that customer's rental records and optionally be removed from the list presented to the customer.

Gorman Exhibit 2, col.49, lns.54-57. Expanse quotes the above passage and then states: “Nowhere does it suggest that these movie rentals would be used in either generating or even updating a customer's profile.” Expanse's Response, p.20 (emphasis added). This is a false statement, presumably stemming from Expanse's apparent failure to read the very next sentence in the passage relied upon. The '257 patent actually states:

Movies which were recently rented by the customer could be determined by checking that customer's rental records and optionally be removed from the list presented to the customer. Customer profiles also would be updated based on the movies selected using the algorithm and optionally could be altered to include a rating of the movie provided by the customer when he or she returns the video.

Gorman Exhibit 2, col.49, lns.54-61 (emphasis added). It is clear that the '257 patent does disclose detailed transaction/purchase records that are used to create customer profiles.

Finally, Expanse argues that a “record of *programs viewed* fails to qualify as a ‘transaction record’” and that there is no disclosure of an “inventory of the recorded transactions.” Expanse's Response, p.28 (emphasis in original). This is yet another example of Expanse improperly focusing on the preferred embodiment. Moreover, given the examples above, it is clear that the '257 patent also discloses records of purchases, which is the same as a “transaction record” under Expanse's construction. Although

Expanse's argument regarding the lack of "inventory" in the '257 patent is completely conclusory, the listing of movies previously rented plainly constitutes an "inventory" under Expanse's construction.

F. INTENDED TARGET MARKET

The claims of the '129 patent require the advertisement profile to identify discretionary demographic characteristics of an intended target market.¹⁰ In a complete contradiction of its argument on "advertisement profile," Expanse now argues that the '257 patent's advertisement (or content) profile is not related to an intended target market. Expanse's Response, pp.15-16. According to its earlier argument, the information contained in the content profile of the '257 patent "is certainly more akin to a target market than it is to an ad profile." Expanse's Response, p.10 (emphasis added). Expanse cannot have it both ways.

Setting aside this blatant contradiction, Expanse's argument that the '257 patent "makes no effort to correlate a program genre with a target market," is incorrect and flies in the face of the definition of target market provided by Expanse in its Response. Expanse's Response, p.15. According to Expanse, a target market is "made up of customers with a demographic makeup that [advertisers] believe would make them among the most likely to purchase the product or services because that product or service is most relevant to their lifestyle." Expanse's Response, p.15. Expanse follows this with

¹⁰ This element appears in the preamble of claim 17 of the '129 patent. As discussed above with respect to the consumer profile "generated," Expanse's position that this is an element of the claim is inconsistent with its Markman position.

the example that "it is common knowledge that a toy company's target market would be people with children." Expanse's Response, p.15.

Bearing in mind that demographics in the '129 and '348 patents is defined broadly to include interest categories (such as genres of music - country, rock, and classical), a content profile in the '257 patent that includes information concerning such a genre for a program available to be provided to a customer would identify a target market under Expanse's own example. See Expanse's Response, p.15; Gorman Exhibit 5, col.7, lns.22-35; Gorman Exhibit 6, col.6, lns.55-67. For example, it is common knowledge that a western program's target market is people who like the genre of westerns (i.e. people have westerns as one of their interest category demographics under the '129 and '348 patents) and are therefore likely to watch western programs. Such a content profile including genre information is explicitly disclosed in the '257 patent.

A profile, either of a customer (Customer Profile) or of a program (Content Profile), is composed of arrays of characteristics which define the customer profile vector CV.sub.i and the program profile vector CP.sub.j. To increase the accuracy in statistical estimation, the selection of the characteristics should follow the following guidelines:

The characteristics should be descriptive of the features of the programs;

The list should be fairly inclusive, i.e., include all the common features of the programs; and

There should be no synonyms, nor much overlapping in meaning between two or more characteristics. In other words, the correlations between the characteristics are desirably minimized.

For example, characteristics currently in use for characterizing video programming include film genres such as westerns, comedies, dramas, foreign language, etc. as defined by the American Film Institute and/or as provided via existing television database services; directors; actors/actresses; attributes such as amount and degree of sex, violence, and profanity; MPAA rating; country of origin; and the like. Of course, many other characteristics may be used, such as those characteristics used in the Minnesota Psychological Test or other more particularized categories

based on life experiences and emotions. Such characteristics may also be value based by indicating the scientific, socio-political, cultural, imagination evoking, or psychological content as well as the maturity level to which the program appeals.

Gorman Exhibit 2, col.11, lns.31-58 (emphasis added). Not only does the '257 patent disclose a content profile having characteristics of its intended target market (or audience) related to interest category-type demographics, but it also discloses more traditional demographics. For instance "maturity level" relates to the age of the targeted audience because it is common knowledge that mature programming targets audiences over the age of 18. "Foreign language" programs is also indicative of a traditional demographic target market. For example, it is common knowledge that programs in Spanish (i.e. programs having a Spanish foreign language content profile) typically target Hispanics.

Expanse's assertion that identifying a genre of programming alone is insufficient to qualify as a profile of an intended target market is yet another example of Expanse's inconsistent positions. In its Response to Catalina's Motion for Summary Judgment of Non-Infringement, Expanse described the target market applicable to the television viewing aspect of the '129 patent:

The '129 patent discloses an advertisement selection system supporting discretionary target market characteristics. In the abstract, the '129 patent teaches that if a user creates advertisement profiles, which describe the actual or hypothetical market for a product (or desired viewing audience if the '129 patent is applied to television advertising),...

Expanse's Response on Non-infringement, p.6 (emphasis added). The desired viewing audience could be identified by any of the characteristics identified in the '257 patent

above, including genre and maturity level. Therefore, as explained above, such a “desired viewing audience” is disclosed in the '257 patent as part of the content profile.

Although Expanse would like to shoehorn the '257 patent by implying that an explicit disclosure of a content profile that “identifies discretionary characteristics of an intended target market” is required, exact identity between the words used in the prior art and the claim language at issue is not mandated. *See Toro*, 355 F.3d at 1320; *Akzo*, 808 F.2d at 1479. The '257 patent does not describe the content profile with respect to an intended target market in so many words, but an intended target market for the various types of content is clearly contemplated. Examples from the '257 patent include:

- An extra complexity is the possible necessity of repeating some programs during a day or a week, because of their high popularity. A simple approach is to let the scheduler first determine the number of necessary repetitions, and then add the number in as constraints in the programming. However, it should be noted that the above approach is for just one channel. If there are multiple channels, then it is usually necessary to first categorize the channels, find their respective ‘target audience’, and then run the scheduling procedure on the target audience of each channel.” Gorman Exhibit 2, col.22, lns.39-48 (emphasis added). This describes categorizing channels with like programming, so that each channel (and all its similar programming) has a “target audience.” The content profiles for these channels, or the programs on the channels, would include characteristics related to identifying the target audience.
- “This [two-way implementation] technique allows the video head end operator to objectively determine which video programming is most likely to be desired by his or her customers and also allows one to minimize the memory requirements at the set top multimedia terminal.” Gorman Exhibit 2, col.41, lns.37-41 (emphasis added). This passage indicates that the operator (content provider) has a target market for its available programming.

See also, Gorman Exhibit 2, col.28, lns.14-19; col.37, lns.27-31. These references indicate that the '257 patent teaches a target market for the available content, which is at least inherently included in the content profile so that the content profile can be compared

to the customer profile. If the content profile did not identify characteristics of the content's target market, there would be no point in comparing the content profile to the consumer profile to select the best suited content for the particular consumer, which is the primary object of the '257 patent.

G. CALCULATING A CORRELATION FACTOR AND SCALAR (PRODUCT)

The claims of the '129 patent each require the step of calculating a correlation factor (between the consumer profile and advertisement profile) as a scalar product. Contrary to its typical claim construction argument that "a" means one or more, Expanse argues that "a scalar product" means a single number. Expanse's Response, pp.17-18 ("the end result is a single number or numerical representative); Gorman Exhibit 1 (construing "a set of heuristic rules" to mean "one or more rules;" "generating a profile" to mean "creating one or more significant features"). It is telling that this requirement was not previously argued in Expanse's Markman claim construction briefing, but is now asserted in vain to attempt to avoid invalidity.

The '129 patent requires that individual advertisement profiles be compared to each consumer profile. The '129 patent also requires that a plurality of advertisements be compared. Gorman Exhibit 5, claim 17 (comparing consumer profile to "a profile of each of a plurality of advertisements.."). Therefore, a scalar product is calculated for each advertisement profile, resulting in a number for each available advertisement. Likewise, the '257 patent compares multiple content profiles to each consumer profile. This comparison in the '257 patent is described in terms of a single "agreement scalar," also referred to as "ac," for each program with a content profile:

In the presently preferred embodiment of the invention, the agreement matrix determining step comprises the step of comparing the customer profiles with the content profiles for each video program available for viewing in a predetermined time period. In particular, the agreement matrix determining step preferably comprises the step of determining a distance in multidimensional characteristic space between a customer profile and a content profile by calculating an agreement scalar for common characteristics, ac, between the customer profile, cv, and the content profiles, cp, in accordance with the relationship:

$$ac_j = 1 / (1 + \sum_{i=1}^n w_i |cv_{ji} - cp_{ji}|)$$

for j=a particular customer of a number of customers I, j=a particular video program of a number of video programs J...

Gorman Exhibit 2, col.5, lns.53-67 (emphasis added). Additionally, the '257 patent provides an example of a single numeric value (.131) for the agreement scalar (ac) between a customer (1) and a content profile (2):

Given the weight matrix and the characteristic profiles of
the customers and the programs, the agreement matrix may
be calculated. For example, the agreement scalar between
customer 1 and program 2 is: 45

$$\begin{aligned} ac_{12} &= 1 / (1 + w_{11} |cv_{11} - cp_{21}| + w_{12} |cv_{12} - cp_{22}| + w_{13} |cv_{13} - cp_{23}|) \\ &= 1 / (1 + .166 * 3.5 + .425 * 9.01 + .409 * 7.11) \\ &= .131 \end{aligned} \quad 50$$

Gorman Exhibit 2, col.21, lns.44-53. Therefore, a single scalar value is calculated for each paired content profile and customer profile, just like that claimed in the '129 patent under Expanse's claim construction.

The fact that the '257 patent makes the further step of putting the individual agreement scalars into a matrix format does not alter the teaching that individual numbers are calculated for each content profile.¹¹ Gorman Exhibit 2, col.19, lns.6-8 ("The calculated agreement scalars, ac, form an agreement matrix AC, which provides

¹¹ Expanse does not dispute that "the individual elements in the '257 patents [sic] matrix are scalars." Expanse's Response, p.18.

measurements of the similarity between the customer profiles and the content profiles."); col.19, lns.13-33 (describing population of cells in an overall agreement matrix with individual agreement scalars, each calculated by comparing a profile for customer i with the content profile for a particular program j). All that is required for invalidation under §102 is that the prior art reference disclose each of the elements claimed. *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 747 (Fed. Cir. 1987). Just like an accused infringer cannot generally avoid infringement by using steps in addition to the claimed steps, Expanse cannot avoid invalidity by relying on a formatting step taught in the '257 patent in addition to calculation of a single agreement scalar. *See Vivid Tech., Inc. v. American Science & Eng'g, Inc.*, 200 F.3d 795, 811 (Fed. Cir. 1999) ("infringement [of open-ended claims 'comprising...'] generally] is not avoided by the presence of elements or steps in addition to those specifically recited in the claim"); *Lewmar Marine*, 827 F.2d at 747, (Fed. Cir. 1987) ("That which will [literally] infringe, if later, will anticipate, if earlier."). Notwithstanding the additional formatting step, the comparison made between a particular customer profile and a particular content profile in the '257 patent results in a single, numeric value agreement scalar, just like the scalar product claimed in the '129 patent under Expanse's construction.

H. PREDETERMINED TIME INTERVAL

Claim 19 (and its dependent claim 20) of the '129 patent requires that transactions over a predetermined time interval be used to generate the consumer profile. Contrary to Expanse's assertions, the '257 patent does teach accumulating data (i.e. programs watched) over a particular period of time to generate a customer profile. In discussing

updating the customer profiles based on what the customer watches over time, the '257 patent repeatedly refers to a time interval for accumulating data regarding what the customer has watched so that it can be used to generate a new profile. For example, the '257 patent describes updating John and Mary's profiles over three separate "runs," where each run "contains 100 loops (time periods)." Gorman Exhibit 2, col.32, ln.45-col.33, ln.11.

45 The following represents a typical feedback process
(without weight correction):
Initial Estimated Profiles

50	1 John	3.399	10.000	3.448
	2 Mary	10.000	2.190	1.216

55 Run 1 (92% correct predictions):
Estimated Profiles

55	1 John	1.943	9.760	5.941
	2 Mary	10.000	2.190	1.216

60 Run 2 (97% correct predictions):
Estimated Profiles

65	1 John	1.597	9.735	6.139
	2 Mary	10.000	2.190	1.216

Run 3 (100% correct predictions):
Estimated Profiles

65	1 John	1.597	9.735	6.139
	2 Mary	10.000	2.190	1.216

Thus, the estimated profiles in Run 3 are the same as for Run 2, where each run contains 100 loops (time periods). After 3 runs, the estimated profiles are good enough to make 10 constant correct predictions.

Gorman Exhibit 2, col.32, ln.45-col.33, ln.11; *see also*, Gorman Exhibit 2, col.30, lns.49-60 ("describe the methods for using passive feedback to improve profiles... [when] [t]here are: J movies, K characteristics, I customers, M 'experts', and P movies to be

selected for a given viewing interval (e.g., a day or week”); col.32, lns.6-8 (“If it is assumed that at the time period n customer i watches a movie...corrections will be made to customer i’s characteristic profile...”).

The '257 patent also has claims directed to creating multiple, time-period specific profiles for a particular customer, or a combination of customers. Gorman Exhibit 2, claims 4, 10, and 19. .

19. A method as in claim 18, wherein said customer profile creating step comprises the step of creating a plurality of customer profiles for each customer, said plurality of customer profiles being representative of the customer's changing preferences for said predetermined characteristics in accordance with time of the day and of the week, and said updating step comprises the step of updating different customer profiles for each customer in accordance with the time of the day and of the week.

Gorman Exhibit 2, claim 19 (emphasis added). Claim 19 illustrates updating a customer profile in accordance with the customer’s viewing habits over a given period of time. For example, one profile may be based on what the customer watched on Monday between 7 p.m. and 10 p.m., while another may be based on what the customer watched on Saturday between 8 a.m. and 3 p.m. This is easily understood as referring to generating profiles based on behaviors (programs viewed or purchases) over a predetermined time interval.

The '257 patent also describes relaying the data used to generate the customer profile (i.e. programs actually watched or purchases actually made) from the customer’s set-top multimedia terminal back to the content provider (head end) on a “periodic basis.” Gorman Exhibit 2, col.41, lns.59-62; col.42, lns.7-11 (“In particular, the customer profile data and viewing habit data is collected and periodically provided via return path 510 to data collection memory 508 as a record of what the customers desire to watch and what

they actually watched.”) (emphasis added); col.42, lns.61-63 (“The data collection system (508, 622) can either operate on a real-time or a non-real-time basis, depending upon the desired/required refresh rate for the data collection.”) (emphasis added). One of ordinary skill in the art would understand these disclosures to mean that the customer profile is at least updated prior to relaying to the content provider, such that the profile is updated on a periodic basis, therefore the profile is generated based on the viewing habits of the customer over that periodic time interval.

I. SET OF HEURISTIC RULES AND DEFINING A PROBABILISTIC MEASURE OF DEMOGRAPHIC CHARACTERISTICS

Claim 20 of the '129 patent and claims 1 (and its dependent claim 8) and 17 of the '348 patent all include a set of heuristic rules for defining a probabilistic measure of demographic characteristics of the consumer. Once more, Expanse improperly relies on Catalina's construction of “heuristic rule” and “probabilistic measure” in its response. Expanse's Response, p.21. This was not the construction relied on by Catalina in its Opening Invalidity Brief. Under Expanse's construction, the '257 patent discloses the use of heuristic rules defining a probabilistic measure of demographic characteristics to generate a customer profile.

Expanse argues that the '257 patent's disclosure of a rule implying the demographic of age and households with children based on the time of day programs are watched is not a heuristic rule as claimed in the '129 and '348 patents, as if some formalized rule is required under Expanse's construction. This is completely contrary to Expanse's position in its Response on Non-Infringement. In that response, Expanse states: “The '348 patent does not require the heuristic rules to be laid out with specificity.

The rules can be inherent in the product.” Expanse’s Response on Non-Infringement,

p.14. Such an inherent rule is plainly disclosed in the '257 patent:

In addition, the customer profile creating step preferably comprises the step of clustering customer profiles for combinations of customers expected to view the video programs at a particular customer location at particular times on particular days. For example, the clustered profiles for a customer’s residence may contain the combined profiles of Mom and Dad in the evening and the combined profiles of the children in the afternoon.

Gorman Exhibit 2, col.

According to Expanse, this rule is not used to create a consumer profile because this rule relates to creating a clustered profile. Expanse’s Response, pp.22-23. This argument is contrary to the parties’ stipulation regarding the meaning of a consumer, as “an individual or multiple individuals linked to a specific identifier such as a loyalty card number, or credit card.” Gorman Exhibit 9. Therefore, a consumer profile in the '129 and '348 patents is not limited to the profile of a single person, but may include multiple people linked by a common identifier. This is the same as clustering the profiles of people within a household (Mom, Dad, and children) into a composite profile for that household, linked by a common identifier (such as address, customer number, set-top box number, etc.), disclosed in the '257 patent. Clearly this passage discloses a heuristic rule that is used to determine the likelihood (probabilistic measure) of demographic characteristics (age, children in household) to create a consumer profile.

Expanse admits that the '257 patent discloses a heuristic rule, within the meaning of the '129 and '348 patents, related to the number of broadcasts of a particular program genre (i.e. golf programs) during a time period (i.e. a week) to the consumer’s level of

interest in that program genre. Expanse's Response, p.22. However, Expanse argues that this rule is not used to generate a consumer profile. *Id.* As Expanse itself acknowledges, this portion of the '257 patent specifically states that "changes to the customer profiles and content profiles should not be made if, for example, a customer does not select a movie to watch which they recently watched." *See* Gorman Exhibit 2, col.28, ln.66-col.29, ln.1 (emphasis added). As discussed above, changes to a customer profile is the same as creating, or generating, a new profile. Although this passage suggests a change should not be made, that suggestion is limited to a particular circumstance – when the customer does not select a movie to watch which he/she recently watched. The passage also suggests the reverse, that the profile should be changed, when other circumstances exist.

For example, this heuristic rule could be used to generate a customer's profile in the following circumstances: (1) if the customer selected (or did not select) a program of the same genre as one recently watched, it would at least indicate a likelihood (or not) that the customer prefers that particular genre (such as watching basketball after recently watching golf suggests that the consumer is likely a sports fan and probably male, since that is another rule inherent in the program itself) or (2) if the customer selected the same movie he/she recently watched this would indicate a greater degree of accuracy for the customer profile generated from that movie (such as watching the same romance movie indicates increased accuracy for the customer having an interest in the romance genre and that the customer is probably female). Again, bearing in mind that demographics in the '129 and '348 patents includes interest categories, this is clearly a

heuristic rule indicating a probabilistic measure of demographics used to generate a profile under Expanse's construction.

Next, Expanse argues that the use of video rental records to update a customer profile is not the use of a heuristic rule to create a profile. Expanse's Response, pp.22-23. It appears that Expanse's argument focuses on the lack of "creation," rather than the lack of a heuristic rule (since a rule that a customer will not want to watch movies he/she has previously rented is a heuristic rule regarding burnout). Expanse's Response, p.22 (adding emphasis to the word "creates"). However, as previously explained, updating is the same as generating.

Regarding this same example, Expanse also misconstrues Catalina's argument. In its Opening Invalidity Brief, Catalina stated that "[a]s such the customer has a profile of suggested movies of interest that excludes previously rented movies." This was not to say that the mere list of movies is a profile. On the contrary, the movies inherently have the same type of content profile as programs discussed above. This movie profile would typically include information concerning genre, such as western, romance, etc. Applying the same concept as the "golf" heuristic rule, and the logical extensions of that rule discussed above, the "movie rental" rule is used to create a customer profile. This rule, that a customer will not want to watch movies he/she has previously rented, is coupled with the profile or characteristics of movies actually rented by the customer to arrive at customer profile, including interest demographics as defined in the '129 and '348 patents.

Expanse summarily dismisses the remaining examples of heuristic rules used to generate a customer profile in the '257 patent cited by Catalina. Expanse's Response,

p.23. These examples included (1) using a clustering rule to update individual profiles based on cluster data (the rule being customers that have one thing in common are likely to have other things in common); (2) using a specific interest cluster rule (the rule being if two people have liked many of the same movies or shows in the past, then they are likely to continue to like similar movies or shows); and (3) using a cross-media correlation rule (the rule being preference in one media correlates to a preference for the same thing in another media, such as sports programs and sports memorabilia). Gorman Exhibit 2, col.34, lns.24-25 and 49-55; col.34, lns.58-59; col.38, lns.34-37; col.51, lns.45-52; col.45, lns.52-55. Without explanation, Expanse implies that these examples are “human observations” and therefore do not qualify as heuristic rules, yet again taking a position contrary to its own claim construction. Expanse’s Response, p.23. According to that construction, a set of heuristic rules is “one or more rules that have been determined from learning, discovery, experiments or trial and error, inferences, educated guesses, market studies, human knowledge, experience or calculations.” See Gorman Exhibit 1 (emphasis added). Expanse also asserts that these rules are used in the '257 patent not to create a profile, but only to update a profile. Expanse’s Response, pp.23-24. This is the same semantic game-playing argument repeatedly relied upon by Expanse. For reasons already discussed, updating and generating/creating are one and the same.

J. OTHER CLAIM TERMS NOT DISPUTED BY EXPANSE

Expanse has not disputed Catalina’s argument that the '257 patent discloses each of the following under Expanse’s construction:

- “product characterization information” or a “product preference profile” as claimed in the '348 patent

- “computer implemented method” or “retrieving” as claimed in each of the claims at issue
- “selecting a targeted advertisement by comparing” as claimed in each of claims of the '129 patent

**K. CATALINA IS ENTITLED TO SUMMARY JUDGMENT OF INVALIDITY
OVER THE '257 PATENT**

For the reasons discussed above, it is evident that the '257 patent discloses each of the elements of the '129 and '348 patents' claims asserted in this case, when considered under Expanse's claim construction. Expanse has failed to raise any genuine issues of material fact regarding the disclosure of the '257 patent and cannot raise any fact issues underlying its own claim construction. Therefore, Catalina is entitled to summary judgment that claims 17, 19, and 20 of the '129 patent and claims 1, 8, and 17 of the '348 patent are invalid over the '257 patent.

**III. INVALIDITY OF CLAIMS BASED ON PRIOR PUBLIC USE OF
CHECKOUT DIRECT, ONE-TO-ONE DIRECT, AND TARGET VONS**

Expanse asserts that infringement of the '129 and '348 patents simply requires storing historical purchase records in a computer, selecting particular consumers to receive targeted offers using a list of UPCs, where the list of UPCs has a demographic element (e.g. baby related products) and delivering one or more targeted offers to them. Catalina denies that Expanse's position on claim construction is correct. However, even if it is, all the asserted claims are invalid, as detailed more fully below. Both Catalina Marketing and Vons grocery stores collected purchase history information many years before Dr. Eldering conceived the inventions claimed in the '348 and '129 patents. Both Catalina and Vons selected customers to receive targeted coupons using lists of UPCs having a demographic element. Both Catalina and Vons actually delivered coupons to

those selected customers. Both Catalina and Vons marketed their programs and explained their operation to their customers. Catalina gave presentations at industry meetings explaining the operation of its programs.

To avoid summary judgment of invalidity, Expanse raises two irrelevant arguments regarding Checkout Direct and One-to-One Direct: (1) customers who received the coupons did not know how the program worked; and (2) Catalina's programs must not have been public because Catalina marked as highly confidential some of its document production, including its source code. See Expanse's Response, pp.24-26. Similarly, Expanse makes a conclusory assertion that Target Vons was not in public use because the public was not aware that a profiling system was in use. See Expanse's Response, p.27. Expanse also attempts to show that Vons' Target Vons program lacked certain claim elements of the '129 and '348 patents. See Expanse's Response, pp.27, 31. This position is inconsistent with Expanse's own claim construction. If Expanse's claim construction is adopted, the asserted claims are invalid as a matter of law. *See* Gorman Exhibit 1, Goldstein's 06/17/04 '129 and '348 Claim Construction.

A. INVALIDATION UNDER §102 DOES NOT REQUIRE USE OR KNOWLEDGE BY THE GENERAL CONSUMING PUBLIC

Expanse does not dispute that Checkout Direct and One-to-One Direct each disclose all of the elements of the '129 and '348 patents;¹² however, Expanse incorrectly asserts that these services were not in "public use" because the "output – the coupons

¹² See Expanse's Response, pp.24-26, 31. Indeed, Expanse cannot assert that Checkout Direct and One-to-One Direct do not involve the use of each of the claimed steps because it has asserted these services

generated – went to the public, but the public never knew it was being profiled or that any method was being used.” Expanse’s Response, p.25. However, invalidating public use or public knowledge under §§102(a) and (b) does not require that the consumers receiving the coupons knew that the method was being used – all that is required is that Catalina’s customers or the industry knew the method was being used. *See Lockwood v. American Airlines*, 107 F.3d 1565, 1570 (Fed. Cir. 1997) (use and knowledge by travel agents of SABRE software system was a sufficient prior art public use under §102 even though there was no evidence that the ultimate consumer (i.e. passengers) knew about or used the software themselves). Moreover, such public use and knowledge does not require knowledge of the inner workings of the software needed to carry-out the claimed method. Rather, use of “high-level aspects” of the method is sufficient to place the claimed method in the “public’s possession” under §102. *See Lockwood*, 107 F.3d at 1570.

In particular, public use under 35 U.S.C. §102(b) includes any use of the claimed invention by a person other than the inventor, who is under no limitation, restriction or obligation of secrecy to the inventor. *Netscape Communications Corp. v. Konrad*, 295 F.3d 1315, 1321 (Fed. Cir. 2002). The Federal Circuit looks at the totality of the circumstances when evaluating whether there has been “public use” within the meaning of §102(b). *Sinskey v. Pharmacia Ophthalmics, Inc.* 982 F.2d 494, 498 (Fed. Cir. 1992). The circumstances may include: the nature of the activity that occurred in public, and the

infringe the '129 and '348 patents.

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public access to and knowledge of the public use. *Netscape Communications*, 295 F.3d at 1320.

Similarly, when prior art anticipates under 35 U.S.C. §102(a) because the prior art is “known,” the knowledge must be publicly accessible. *3M Co. v. Chemque, Inc.*, 303 F.3d 1294, 1302 (Fed. Cir. 2002). Making the invention publicly known requires only that the public enjoy the benefits or the use of the prior invention. *Friction Division Prods., Inc. v. E.I. DuPont de Nemours & Co.*, 658 F. Supp. 998, 1013-14 (D. Del. 1987). Additionally, when prior art anticipates under 35 U.S.C. §102(a) because the prior art has been “used,” all that is required is that the claimed invention be accessible to the public. *3M Co.*, 303 F.3d at 1306.

B. CHECKOUT DIRECT WAS “PUBLICLY USED” BECAUSE BOTH RETAILERS AND WHOLESALERS HAD UNRESTRICTED INFORMATION ABOUT HOW IT OPERATED AND THE GENERAL PUBLIC ENJOYED THE BENEFITS OF THE INVENTION

Checkout Direct was announced in 1992 and first used commercially in 1994. *See* Hickman’s Declaration, ¶ 30. Thus, the Checkout Direct system has been used by Catalina for its customers, and described to those customers, since well before the conception of the inventions claimed in the '129 and '348 patents. For example, the undisputed evidence establishes that Catalina has maintained a database of detailed purchase records for use in Checkout Direct and One-to-One Direct since at least 1992. *See* Hickman’s Declaration ¶ 12, 13. Based on customer requests, Catalina develops a program for that customer that includes a list of product identifiers (typically UPCs) corresponding to the requested products to be promoted. *See* Hickman’s Declaration ¶ 18. One such program targeted households with children based on purchases of products

in the Children's Cereal, Frozen Children's Dinner/Entrée, Toys, and other child-related product categories. *See* Hickman's Declaration ¶ 31, 32. After a program for a customer has been approved, the historical database is queried to select consumers (i.e. specific loyalty card numbers) that meet the triggering criteria and who will receive a coupon. *See* Hickman's Declaration ¶ 24.

Furthermore, since 1997, Catalina has been selling wholesalers and retailers programs like One-to-One Direct, a direct mail program that targets consumers based on what they buy. *See* Hickman's Declaration, ¶ 32. In fact, One-to-One Direct is widely used by many retailer chains and national product manufacturers. *See* Hendry's Declaration, ¶ 12. Moreover, from the inception of On-to-One Direct, Catalina has given many presentations at industry meetings explaining the operation of the product. For instance, Catalina's data format for Checkout Direct and One-to-One Direct consists of matrices, some of which are prepared for client presentations. *See* Hickman's Declaration, ¶ 30, 31. The undisputed evidence clearly shows that Catalina has been selling and running such programs for its customers since the early days of Checkout Direct and certainly in 1997 with One-to-One Direct. *See* Hickman's Declaration ¶ 33. The undisputed evidence also establishes that Catalina's customers knew how these programs were run. *See* Gorman Exhibit 14, ¶¶2-4 (Thissen Declaration). Expanse has not raised any genuine issues of material fact to dispute such public uses and public knowledge.

Moreover, Catalina's Checkout Direct system has had an impact in the market place, allowing retailers and manufacturers to target consumer based on what they

purchase. Though scanning had been expanding in the supermarket industry since the selection of a standard bar code, the UPC (Universal Product Code) in 1973, the Catalina system was the first that allowed such targeting. *See* Gorman Exhibit 14, Thissen's Expert Report, p.6. The public - wholesalers, manufacturers, and general consumers - has enjoyed the benefits of Catalina's Checkout Direct and One-to-One Direct. Currently, data from 15,012 grocery stores in the United States is collected by Catalina every night for use in Checkout Direct, with Catalina's database containing approximately 20 billion individual purchases over a two year period. *See* Hickman's Declaration, ¶ 5, 6. Catalina's model represents a revolution in electronic marketing that has generated considerable saving to wholesalers and manufacturers, as a result of the direct targeting approach, and has given the general consumer access to a myriad of promotions to suit their wants and needs.

As noted earlier, the relevant public under §102(b), for purposes of public use, involves "a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor." In this case, the public includes wholesalers, retailers, and consumers. Catalina's basic method of Checkout Direct has been known by the public, including retailers and wholesalers, since at least 1992. *See* Hickman's Declaration ¶ 12, 13. Contrary to Expanse's improper limitation of "public," to qualify as public use under §102 Catalina does not need to prove public use or knowledge from the perspective of the consumer. Expanse has not raised any genuine issues of fact regarding public use (or knowledge) by wholesalers and retailers. Therefore, Catalina is

entitled to summary judgment of invalidity based on its prior use of Checkout Direct and One-to-One Direct under Expanse's claim construction.

Moreover, to prove invalidity under §102, Catalina was not required to disclose to the public the details of the software running Checkout Direct or One-to-One Direct. Expanse attempts to avoid invalidity with a red herring argument in reference to the confidentiality designation of some of Catalina's documents. *See* Expanse's Response, pp. 25, 26. Expanse asserts that because Catalina has proprietary software and designated documents produced in this litigation, including source code, as confidential, that necessarily precludes a finding of public use or knowledge under §102. *See* Expanse's Response, p.26. This argument completely disregards the significant difference between the public knowledge of the basic use of the Checkout Direct process and the detailed source code to run the process. *See Lockwood*, 107 F.3d 1565, 1570 (Fed. Cir. 1997) (affirming summary judgment of invalidity under §102. The fact that "essential algorithms of the SABRE software were proprietary and confidential" did not preclude summary judgment, "American [Airline's] public use of the high-level aspects of the SABRE system was enough to place the claimed features of the '359 patent in the public's possession").¹³

There is simply no connection between the documents that Catalina designated as "Highly Confidential" and the general claim steps at issue in this litigation. *Id.* Catalina's highly confidential material consists of the detailed source code and other specific confidential material not related to the claim language. The claims at issue are

¹³ Expanse cites a district court opinion for the same *Lockwood* case. *See* Expanse's Response, p.24.

directed to the steps of a computer implemented method, not the source code running the program. *Id.* (patentee “cannot negate [public possession of the claimed invention] by evidence showing that other, unclaimed aspects of the SABRE system were not publicly available”).

Expanse makes no other effort to show that the Catalina systems do not constitute public use and thus are not prior art. Consideration of the entire surrounding circumstances is necessary to a determination of whether there has been public use. Therefore, consideration of the totality of the circumstances surrounding Checkout Direct and One-to-One Direct, the availability, use and knowledge of the systems to retailers and wholesalers, the benefit enjoyed by consumers, the impact in the market place, provide undisputed evidence that the Catalina systems were in public use and publicly known under §102 sufficiently in advance of the conception and priority filing dates to invalidate the '129 and '348 patents.

C. THE CASES CITED BY EXPANSE ACTUALLY SUPPORTS CATALINA’S POSITION THAT CHECKOUT DIRECT AND ONE-TO-ONE DIRECT ARE INVALIDATING PRIOR ART UNDER §102

Expanse spends great effort arguing that Catalina’s assertions of prior art are not public use. However, the very case Expanse relies on, the “landmark decision” *Lockwood v. American Airlines*, 1995 U.S. Dist. LEXIS 20548 (S.D. Cal 1995) (*affirmed* *Lockwood v. American Airlines*, 107 F.3d 1565 (Fed. Cir. 1997)), actually finds public use for software even though the “inner workings” were not known to the public. See Expanse’s Response, p.24; *Lockwood*, 1995 U.S. Dist. LEXIS 20548 at *5. The facts of *Lockwood* are similar to this case in that Lockwood obtained a patent for software that

covered the SABRE airline reservation system. American Airlines asserted that the SABRE system was prior art because it was commercially used more than one year before the Lockwood patent was filed. Lockwood, like Expanse here, asserted that because the travel agents did not know how the system worked, it was not prior art. The court in *Lockwood* disagreed, holding that “an invention may be ‘used by the public’ even though the public does not have knowledge of the inner working [hardware and software requirements for a computerized method] or composition of the invention.” *Lockwood*, 1995 U.S. Dist. LEXIS 20548 at *5. This significant point was apparently overlooked by Expanse.

Expanse also cites *Kizenbaw v. Deere & Co.*, 741 F.2d 383, 390 (Fed. Cir. 1984) for the proposition that “a commercial use of a machine or process is a public use, even if the machine or process is kept secret.” Expanse’s Response, p.24. This too is contrary to Expanse’s argument that Checkout Direct and One-to-One Direct cannot have been publicly used because of the secrecy of the source code and other documents unrelated to the claimed steps.

Expanse then cites *Dunlop Holdings v. Ram Golf Corp.*, 524 F.2d 33 (7th Cir. 1975), which does not relate to prior use or knowledge under §§102(a) or (b). *See* Expanse’s Response, p.24. Rather, *Dunlop* involved a priority of invention dispute under §102(g), which invalidates a patent if, before the patentee’s conception, the invention was made in this country by another who had not abandoned, suppressed, or concealed it. *Dunlop*, 524 F.2d at 34. In addressing the “abandoned, suppressed, or concealed” issue, the court found that the invention could not have been abandoned, suppressed, or

concealed if the earlier inventor allowed the invention to be publicly used, even if some details of the invention were not disclosed. *Id.* at 37. Although not directly related to §§102(a) or (b), this holding actually supports Catalina's position that invalidating public use does not require disclosure of detailed aspects of the invention.

Nevertheless, after extensively elaborating on this issue, Expanse moves its focus to *Gillman v. Stern* 153 F.2d 516 (2d Cir. 1940), which also addresses §102(g). Expanse's Response, p.25. In *Gillman*, the court found that the output from a machine sold commercially did not amount to public use under §102(g), where the machine was absolutely kept secret from the outside world, except to secure selling agents for its product. *Gillman v. Stern*, 114 F.2d 28, 31 (2d Cir. 1940). Interestingly enough, Expanse could not find a more recent case to support its core argument on "public use." Without further discussion of the substance of *Gillman*, Expanse then attempts to analogize the coupons generated from the Checkout Direct process with the output of the machinery in *Gillman*. See Plaintiff's Brief in Opposition to Defendant's Motion for Summary Judgment of Invalidity of the '129 and '348 Patents, pp. 25. Expanse stretches one's imagination with its attempted comparison between the output of a puffing machine, which is representative of the performance of the machine, and a coupon printed by a printer but generated through a targeting method unrelated to the printer itself. Additionally, Expanse conveniently fails to note that in *Gillman*, "the machine, process, and product were not well known to the employees in the plant," and "efforts were made to conceal them from anyone who had a legitimate interest in understanding them." *Id.* at 31. These facts are distinguishable because here there is undisputed

evidence that retailers and manufacturers knew about and used Checkout Direct and One-to-One Direct.

Thereafter, Expanse states that in *Ostby & Barton Co. v. Jungersen*, the Third Circuit adopted the *Gillman* decision. Expanse specifically notes that the Court held “One who had earlier conceived the same invention could defeat a later patent only if he had in some way made public his results.” *See* Expanse’s Response, pp. 25; *see also* *Ostby & Barton Co. v. Jungersen*, 65 F.Supp. 652, 656 (D.N.J. 1946). Expanse’s interpretation is correct, yet its application to allege that Catalina’s Checkout Direct was not public is misplaced and inconsistent with more recent binding Federal Circuit precedent, for undisputedly Catalina has “...in some way made public its results.”

D. EXPANSE INCORRECTLY ASSERTS THAT TARGET VONS WAS NOT IN “PUBLIC USE”¹⁴

The Target Vons program was in use since at least as early as 1993. *See* Hendry’s Declaration ¶ 10. Target Vons was based on the idea of using purchase history information from the company’s customer card, “VonsClub,” to offer targeted marketing promotional opportunities to manufacturers. *See* Hendry’s Declaration ¶ 3, 4. As part of the Target Vons program, Vons identified groups of UPCs for products that were collected into “LIFESTYLE” groups, which had demographic and other category descriptors with which to associate a particular product. Example LIFESTYLE groups included “Baby,” for products associated with babies, and “Ethnic,” for products targeted at various ethnic groups. *See* Hendry’s Declaration ¶ 5, 6. Documents describing the Target Vons program, the reason for development, operation, targeting options to

manufacturers, and mailers were circulated to manufacturers in 1993. *See* Hendry's Declaration ¶ 10.

In 1993, the Vons Company launched its "Target Vons" program that allowed manufacturers to target specific consumers based on their purchases. *See* Gorman Exhibit 14, Thissen's Expert Report, p.8. Target Vons created a more effective use of dollars for the Consumer Packaged Goods (CPG) manufacturers by redirecting funds from untargeted to targeted promotions. *See* Gorman Exhibit 14, Thissen's Expert Report, p.7, 8. Target Vons had, thus, a great impact in the marketplace and notably contributed to "promote the progress of science and useful arts."

Therefore, considering the totality of circumstances, Target Vons' public use and knowledge by retailers and wholesalers, the benefit the program imparted to the general consumer, and the impact in the market place, provide evidence that the Target Vons program was in public use.

E. EXPANSE ALLEGES THAT TARGET VONS DOES NOT DISCLOSE ALL ELEMENTS OF THE '348 PATENT

Target Vons is very similar to Catalina's Checkout Direct and One-to-One Direct. To the extent the claims of the '129 and '348 patents are construed to cover Catalina's Checkout Direct and One-to-One Direct, the claims necessarily cover Target Vons, and are therefore, invalid. In fact, Target Vons is closer to the '129 and '348 patents than Catalina's products because Target Vons explicitly tied demographic profile information to specific loyalty card numbers and would target promotions to loyalty card numbers falling within a specific lifestyle category. Expanse's position that target Vons lacked

¹⁴ Expanse incorrectly refers to "public use" under §102(e).

certain claim elements is inconsistent with Expanse's own claim construction as applied to Catalina's products in its infringement analysis. "That which infringes if later, anticipates if earlier." *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 780 (Fed. Cir. 1987). Therefore, if Expanse's claim construction is adopted, the asserted claims are invalid as a matter of law.

IV. INVALIDITY OF CLAIMS BASED ON THE '764 PATENT

Expanse incorrectly alleges that the '764 patent cannot be an invalidating reference under §102(e). Additionally, Expanse incorrectly concludes that the '764 patent does not teach the elements of the '348 patent. To support its allegations, Expanse creates what it calls "[a] significant distinction between the '764 and the '348 patents." To this effect, Expanse states that while the method described in the '764 patent "can only infer that the consumer has one or more children of an age," the method of the '348 patent "may be able to infer the age of the child, or determine whether or not there are multiple children." This play on words is what Expanse calls a significant distinction.

A. THE '764 PATENT TEACHES A METHOD OF ACCUMULATING DETAILED PURCHASE RECORDS

Claim 1 of the '764 patent claims a database and means for inputting [accumulating] data into the database from a plurality of sources. Claim 5 teaches a central database containing updated information about households, customers and accounts [detailed purchase records]. In general, the invention disclosed in the '764 patent provides a system and method for assembling a comprehensive database from diverse sources.

B. THE '764 PATENT TEACHES RETRIEVING THE DETAILED PURCHASE RECORDS

Claim 7 of the '764 patent consists of a system with means for searching the database in response to structured queries and identifying records to match said queries. Claim 10 relates to the system means for downloading [retrieving] data concerning the records that match said queries, and means for transmitting [retrieving] the data records, comprising customer identification data and customer summary information in real time [detailed purchase records] from the user work station to a plurality of branch workstations. Also, the use of queries allows a user to specify parameters to select records to be retrieved.

C. THE '764 PATENT TEACHES RETRIEVING PRODUCT CHARACTERIZATION INFORMATION ASSOCIATED WITH PRODUCTS INCLUDED IN THE DETAILED PURCHASE RECORD

Claim 5 refers to means for generating [retrieving] at least one lead [product characterization] comprised of a first piece of data that identifies a customer and a second piece of data that indicates the customer's interaction with the financial institution [detailed purchase records].

D. THE '764 PATENT TEACHES A SET OF HEURISTIC RULES DEFINING A PROBABILISTIC MEASURE OF DEMOGRAPHIC CHARACTERISTICS OF A PURCHASER OF A PRODUCT

"The household demographics screen displays appended household information purchased from outside sources. This screen may also display information that is inferred [probabilistic measure of demographic characteristics] from other information [purchases] about the customer. For example, repeated usage of a credit card at a baby supply store might be used to infer that the customer has one or more small children."

Expanse not only failed to closely examine the disclosure and claims of the '764 patent in an attempt to establish any real differences, but Expanse relied on quotes and random excerpts from the specification to incorrectly conclude that the '764 does not teach the elements of the '348 patent as required under §102(e).

V. CONCLUSION

For the reasons stated herein, claims 17, 19, and 20 of the '129 patent and claims 1, 8, and 17 of the '348 patent are invalid under §102. Each of the elements of these claims are disclosed in the prior art publications discussed above and were in public use by Catalina or others prior to the relevant critical date.

Date: July 16, 2004

Respectfully Submitted,



/JVG2384

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CERTIFICATE OF SERVICE

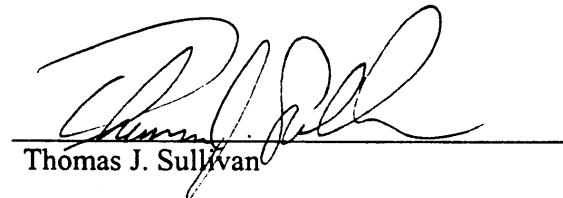
The undersigned certifies that a copy of the foregoing **DEFENDANT'S REPLY IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF THE '129 AND '348 PATENTS** was served upon the attorneys of record of all parties in accordance with Federal Rules of Civil Procedure, on this 16th day of July, 2004, addressed as follows:

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